CLAIMS

1. A method of producing a Mg-REM-Ni based hydrogen-absorbing alloy, characterized by comprising a first step of melting a rare earth element starting material having a low evaporation pressure and a nickel starting material in a melting furnace to obtain a melt of REM-Ni alloy; a second step of adding magnesium starting material to the melt of REM-Ni alloy and keeping a pressure inside the melting furnace at a given level to obtain a melt of Mg-REM-Ni alloy; and a third step of cooling and solidifying the melt of Mg-REM-Ni alloy at a given cooling rate.

2. A method according to claim 1, wherein the temperature of the melt of REM-Ni alloy at the addition of the magnesium starting material is 1250-1400°C at the second step.

3. A method according to claim 1 or 2, wherein the pressure inside the melting furnace after the addition of the magnesium starting material is kept at not more than 500 Torr at the second step.

4. A method according to claim 1, wherein the cooling rate in the cooling and solidifying the melt of Mg-REM-Ni alloy is 50-500°C/sec at the third step.